

ABSTRACT

A digital down converter is provided. The digital down converter includes an input adapted to receive an input signal, a mixer circuit coupled to the input to down convert the input signal, and a decimation circuit, coupled to the mixer. The decimation circuit is adapted to decimate the down converted signal by a factor selected based on a characteristic of the input signal. The digital down converter further includes a signal conditioning circuit, coupled to the output of the decimation circuit, that conditions the decimated signal, an interpolator, coupled to the decimation circuit, that increases the number of samples in the conditioned signal, and a second mixer circuit, coupled to the interpolator, the second mixer circuit adapted to modulate a carrier with the conditioned signal.